

Appl. No. 10/521,953
Amdt. dated March 14, 2006
Reply to Office Action of December 14, 2005
Attorney Docket No. 3824-050244

Amendments to the Drawings:

The attached sheet of drawings includes a change to Figure 4. Figure 4 has been amended to insert the legend --PRIOR ART--.

Attachments: Replacement Sheet

Annotated Copy Showing Changes

REMARKS

In the Specification

The specification has been amended to correct a typographical error. No new matter has been added.

Drawings

Figure 4 has been amended to insert the legend --PRIOR ART-- as only that which is old is represented. Support for this amendment can be found in the specification at page 4, lines 28-30 and page 6, lines 23-29.

Entry of these amendments is respectfully requested.

Information Disclosure Statement

On page 2 of the Office Action, the Examiner has indicated that the Information Disclosure Statement (IDS) submitted on November 3, 2005, is in compliance with the provisions of 37 CFR §1.97 and has been considered. However, the Form PTO/SB/08A initialed by the Examiner and returned with the Office Action shows that the Examiner has drawn a line through three of the references listed on Form PTO/SB/08A, indicating that the citation is not in conformance and has not been considered. Applicants respectfully point out that copies of the three prior art references were not provided because they were received by the United States Patent and Trademark Office, as indicated in the Notice Of Acceptance Of Application Under 35 U.S.C. 371 And 37 CFR 1.494 Or 1.495, dated August 1, 2005. Nevertheless, Applicants enclose herewith copies of the three Japanese patent references for the Examiner's convenience as well as another copy of our timely-filed Form PTO/SB/08A and respectfully request that the Examiner consider these references and return an initialed copy of Form PTO/SB/08A indicating such consideration.

35 U.S.C. §103 Rejection

Claims 11-19 are pending in the application. Claim 11 is in independent form. Claims 11-19 stand rejected under 35 U.S.C. §103(a) for obviousness based upon U.S. Patent Application Publication No. 2003/0002803 to Trezza et al. (hereinafter "the Trezza application"). In view of the following remarks, Applicants respectfully request reconsideration of this rejection.

As defined by independent claim 11, the present invention is an optical connector comprising a plurality of insertion holes for inserting optical fibers therein. The insertion holes are provided at predetermined intervals. The accuracy of the center-to-center dimension between the insertion holes that are adjacent to each is within $\pm 0.5 \mu\text{m}$, and the degree of parallelization in the hole axis direction between the insertion holes that are adjacent to each other is within ± 0.1 degree. The optical connector comprises a substrate formed of a material selected from the group consisting of glass composed mainly of silicon oxide, glass ceramic, quartz glass, translucent alumina, and zirconium oxide.

The Trezza application discloses a commercial fiber optic connector including optical fibers with a first part and a second part separated by a length, a low-precision piece having a peripheral shape of a part of a ferrule-like unit and two high precision pieces each having fiber holes therein. A chamber separates the two high precision pieces defining a volume therebetween. The optical fibers have their first parts within the fiber holes in one of the high precision pieces and their second parts within the other high precision piece.

On page 3 of the Office Action, the Examiner indicates that the Trezza application fails to teach or suggest that the accuracy of center-to-center dimension between
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the insertion holes adjacent to each other be within $\pm 0.5 \mu\text{m}$ and that the degree of parallelization in the hole axis direction between the insertion holes adjacent to each other be within ± 0.1 degree. The Examiner contends that it would have been obvious to one skilled in the art at the time of the invention to use such accuracies because discovering an optimum value of a result effective variable involves only routine skill in the art. While it is correct that discovering the optimum value of a result effective variable might be characterized as routine experimentation, the parameter in question must first be recognized as a "result effective variable".

The Manual of Patent Examining Procedure (MPEP) defines a "result effective variable" as a variable that achieves a "recognized result" (see MPEP §2144.05). Regarding the center-to-center dimension between the insertion holes adjacent each other and the degree of parallelization in the hole axis direction between the insertion holes adjacent to each other, these parameters do not achieve a "recognized result". Instead, the present application describes that such dimensional accuracy of the insertion holes can realize the provision of an optical connector with no significant coupling loss (see page 3, lines 1-4 of the specification). Therefore, since the center-to-center dimension and the degree of parallelization are not "recognized result effective variables" in the prior art, the present invention is not obvious in light of the Trezza application.

For the foregoing reasons, Applicants believe that the subject matter of independent claim 11 is not rendered obvious by the Trezza application. Reconsideration and withdrawal of the rejection of independent claim 11 are respectfully requested.

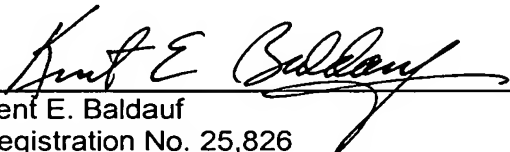
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Claims 12-19 depend from and add further limitations to independent claim 11 or a subsequent dependent claim and are believed to be patentable for at least the reasons discussed hereinabove in connection with independent claim 11. Reconsideration and withdrawal of the rejections of claims 12-19 are respectfully requested.

Based on the foregoing remarks, reconsideration of the rejections and allowance of pending claims 11-19 are respectfully requested.

Respectfully submitted,

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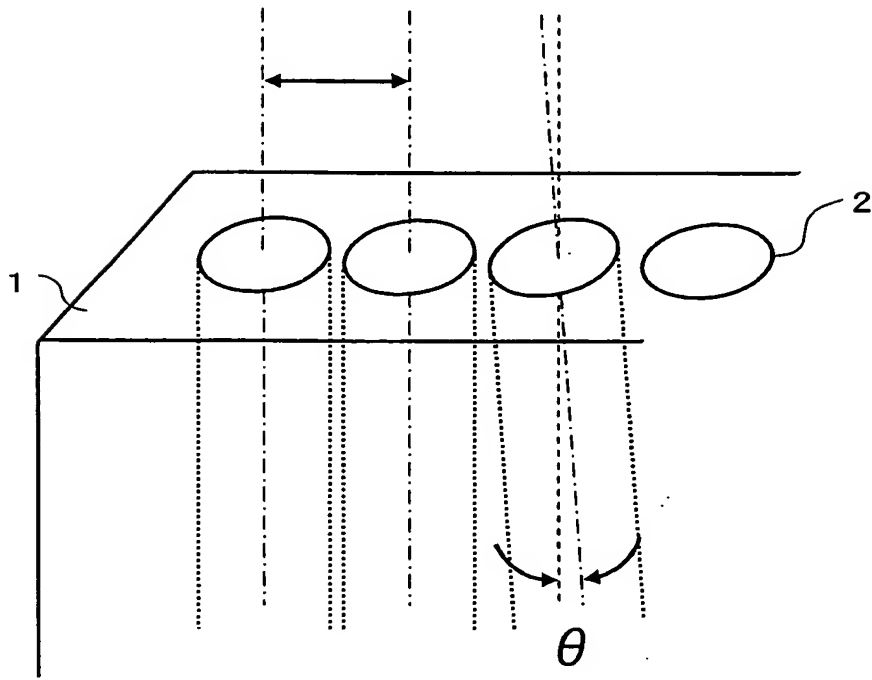


FIG. 3

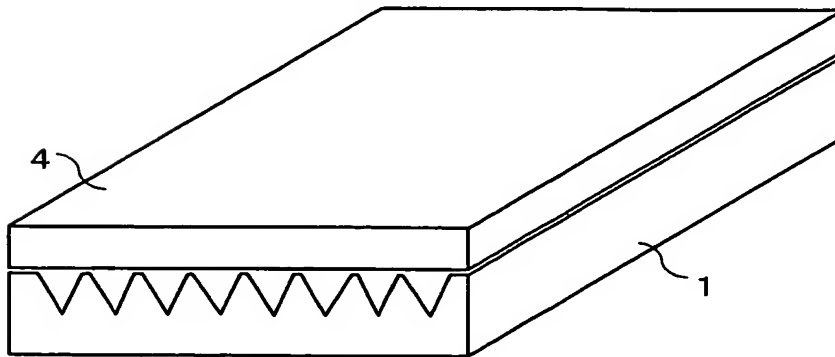


FIG. 4 --PRIOR ART--